

Check on longleaf pine depth planting experiment 27 years after planting

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In the summer of 1975 the author rechecked longleaf pine depth of planting plots installed in the winter of 1918 near Brooklyn, Miss. Five year results were reported in "Tree Planters' Notes," No. 17, August 1954 and are repeated in table 1 with results of the 1975 check.

The 8 test plots were damaged by hogs during the first 5 years following planting, and probably thereafter. Because the plots were located near experimental slash pine plantings, fire was excluded and brown spot needle blight took a toll in the early years. Little is known of the history of the plots from 1953 to 1975, but an old plowed line through plot 2 indicates the possibility of wildfire. Plots 1 and 2 were eliminated from the 1975 figures because it was impossible to locate the rows with any degree of certainty. Since the remaining 6 plots (3-8) were also difficult to locate, the figures could be subject to some error even though great care was exercised in the observations. For all of these reasons the 1975 survival figures should not be regarded as typical of the species capability.

In spite of the uncertainties outlined above, it is interesting to note that some trees in each planting treatment have survived and grown reasonably well. For all treatments except "Shallow 1 1/2" inches, average diameter falls between 4.1 and 5.1 inches and average height

23 and 28 feet (S 1.5 3.0 inches and 19 feet) based on ocular estimates. All treatments except "Shallow 1/2" inches had specimens reaching 8 inches DBH (most treatments had reached 10 inches DBH) and 40 feet in height.

Conclusions

1. It is possible for longleaf pine seedlings planted with the root collars below the ground surface as much as 1/2 inches, and buds covered

with soil to survive and grow.

2. Although it was originally feared that machine planting would be somewhat inferior to bar planting, this experiment indicated machine planting equal or superior to bar planting.

3. It can still be recommended that shallow planting of longleaf pine seedlings be avoided. Planters should strive to plant seedlings with root collars at ground level or no more than 1/-inch

Table 1.-Survival alter 5 and 27 Years of Longleaf Pine planted at various Tenths

Planting Method	Planting Depth (Inches)	1953	Survival
		-----	Percent -----
Bar-slit	Deep 1 1/2	44.5	14.7
	Deep 1	59.5	10.7
	Deep 1/2	76.0	16.0
	Correct	68.0	10.7
	Shallow 1 1/2	33.0	4.7
	Shallow 1	49.0	10.0
	Shallow 1/2	48.5	16.0
Machine	Deep	62.3	15.4
	Correct	72.5	18.7
	Shallow	38.7	8.1

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